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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,851	05/17/2006	Juergen Gras	R.307336	8909

2119 7590 11/09/2007  
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ALEXANDRIA, VA 22314

EXAMINER
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GIMIE, MAHMOUD

ART UNIT	PAPER NUMBER
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3747

MAIL DATE	DELIVERY MODE
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11/09/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/579,851

Applicant(s)

GRAS ET AL.

Examiner

Mahmoud Gimie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/17/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because it is not a single paragraph. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11, 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Rembold et al. (US 2003/0098016) or Ohta et al. (US 2003/0200956).

Rembold et al. (hereinafter Rembold) disclose in an apparatus for feeding fuel from a tank to an internal combustion engine, having a feed pump (19), a pressure line (21) leading from the feed pump to the engine, a check valve (not numbered) located in the pressure line (21) downstream of the feed pump (19), and a pressure sensor (29) fluidically communicating with the pressure line, the improvement wherein the pressure sensor (29) is operatively connected to the pressure line downstream of the feed pump (19) and upstream of the check valve (not numbered, figure 2).

Regarding claim 14, Rembold discloses a method for pressure detection, employing an apparatus for feeding fuel from a tank (17) to an internal combustion engine, a feed

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pump (19), a pressure line (21) leading from the feed pump to the engine, a check valve (not numbered) located in the pressure line downstream of the feed pump (19), and a pressure sensor (29) fluidically communicating with the pressure line, the method comprising operatively connecting the pressure sensor (29) to the pressure line (21) downstream of the feed pump (19) and upstream of the check valve (not numbered), and using the pressure sensor (29) for pressure detection in the pressure line (21) and for pressure detection in the tank.

Regarding claim 16, wherein the pressure sensor (29) produces a measurement signal, and wherein the measurement signal is used in an engine controller as a controlled variable for regulating the feed pump and/or for a leak diagnosis in the pressure line and/or for a tank leak diagnosis.

**Regarding application of Ohta et al**, they disclose in an apparatus for feeding fuel from a tank to an internal combustion engine, having a feed pump (3), a pressure line (22) leading from the feed pump to the engine, a check valve (not numbered) located in the pressure line downstream of the feed pump (3), and a pressure sensor (not numbered) fluidically communicating with the pressure line, the improvement wherein the pressure sensor is operatively connected to the pressure line downstream of the feed pump (3) and upstream of the check valve (not numbered, figure 1).

Regarding claims 14 and 16, the detected pressure is transmitted to the engine controller (14, paragraph 0028) and the invention further discloses a method for operating the fuel feeding system.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12, 13, 15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rembold et al. (US 2003/0098016) in view of Graham et al. (US 6,302,144).

Rembold et al. disclose all the limitations as applied to claims 11, 14 and 16 above, except for the pressure sensor, the pump and a temperature sensor are located within the fuel tank, and the sensors are used for fuel tank leak diagnostics.

Graham et al. discloses a fuel pressure sensor (38), a fuel temperature sensor (34) and plurality of other sensors disposed within a fuel tank (10, col. 3 and ll. 42-49). The sensors are used to perform diagnostic tests, col. 7 and ll. 3-5.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Rembold by disposing a plurality of sensors such fuel pressure sensor, temperature sensor and other sensors used in fuel system diagnostics in the vehicle fuel tank as disclosed by Graham to reduce the number of openings through the vehicle fuel tank, see abstract of Graham.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references show engine fuel systems.

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7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mahmoud Gimie whose telephone number is 571-272-4841. The examiner can normally be reached on Monday-Friday between 7 a.m. -3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen K. Cronin can be reached on 571-272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MG

  
**MAHMOUD GIMIE**  
**PRIMARY EXAMINER**